

## Document No. 3219

Adopted at Meeting of 10/9/75

MEMORANDUM

October 9, 1975

TO: BOSTON REDEVELOPMENT AUTHORITY

FROM: Robert T. Kenney, Director

SUBJECT: Authorization to Petition the Zoning Commission for a Text Amendment Establishing and Regulating Flood Hazard Districts and for a Map Amendment Adopting Flood Hazard Maps

Under resolutions adopted by the City Council, the Boston Redevelopment Authority, the Zoning Commission, the Public Works Department, and the Health and Hospitals Department in June of 1975, the City of Boston is committed to adopting and administering land use controls for areas subject to flood hazard. On the basis of these resolutions, the Department of Housing and Urban Development authorized the sale of federally subsidized flood insurance in Boston as of July 7, 1975.

The staff has drafted an amendment to the text of the Boston Zoning Code to provide for a Flood Hazard District and regulations therefor. An earlier draft was submitted to the Army Corps of Engineers, the Metropolitan District Commission, the Massachusetts Water Resources Commission, the Metropolitan Area Planning Council, and HUD. Recommendations from these bodies were incorporated. More recently, the draft was circulated to other City agencies, watershed associations, and conservation groups.

Maps of the areas designated as Flood Hazard Districts are being presented at the October 9 meeting of the Authority. They are based on the best information available at this time, but their absolute accuracy cannot be guaranteed. Very few of the elevations cited fall on the contour lines which are available on current maps; the precision of the available maps is not 100 percent. Thus the amendment requires anyone proposing to build on or abutting land shown by the maps to be subject to flood hazard to have onsite topographic and/or vegetation surveys made to determine what, if any, portion of the land is in fact subject to flood hazard. In such a case, the topographic or vegetation survey would govern whether the land is subject to the controls set forth in the amendment.

The maps to be adopted at this time are not final. Further study in cooperation with engineering consultants provided by HUD will result in a Flood Insurance Rate Risk Map, which will map not only the presence of risk but the degree of risk, on which actuarial insurance rates will be based. We are hopeful that during this study, contour lines of certain critical elevations will be mapped, by means of new interpretations of existing aerial photography.

I recommend that the Advisor to the Zoning Commission be authorized to petition the Zoning Commission to amend the Boston Zoning Code to establish a Flood Hazard District and regulations therefor, and to present a series of Flood Hazard District maps for adoption by the Zoning Commission.  
Recommend approval.

## ZONING HEARING

The Zoning Commission of the City of Boston hereby gives notice, in accord with Chapter 665 of the Acts of 1956 as amended, that a public hearing will be held on Friday, October 24, 1975, at 10:00 a.m. in Room 801, Boston City Hall, in connection with Text Amendment Application No. 52 and Map Amendment Application No. 180, by the Advisor to the Zoning Commission.

Said amendments would establish a Flood Hazard District as an overlay zoning district which would impose zoning restrictions over and above the restrictions of the presently existing residential, business and industrial districts. Uses in flood hazard districts would be limited to conservation, recreation, agriculture, horticulture, forestry and aquaculture, unless after public notice and hearing the Board of Appeal found that a proposed use or structure would not be detrimental to the public health, safety and welfare. In making this decision, the Board of Appeal would consider such matters as increase of flood risk to other properties, the adequacy of public water, drainage and sewer systems, the protection of utilities from flood damage and the like. Plans would be reviewed by the Boston Redevelopment Authority as planning agency for the City, the Public Works Department, the Boston Conservation Commission, and the Health and Hospitals Department. These City agencies would submit reports with recommendations to the Board of Appeal to assist it in reaching a decision.

The flood hazard restrictions would not be retroactive. Existing uses and structures in the flood hazard district would continue to be legal, though they could not be expanded without Board of Appeal review. Existing structures could be used for any purpose allowed in the underlying residential, business or industrial district without a Board of Appeal hearing.



The areas involved are to be shown on a series of maps entitled "Flood Hazard Districts - City of Boston". These areas are also described in the text in terms of elevations based on Mean Sea Level and Boston City Base. The elevations are to be the determining factor in deciding whether a parcel or part of a parcel is in the Flood Hazard District and, therefore, subject to the above regulations.

The areas to be included in the Flood Hazard District are lands lying along or sloping toward: Boston Harbor, Dorchester Bay, Massachusetts Bay, the tidal estuaries of the Charles, Mystic and Neponset Rivers; Charles River Basin, Charles River abutting West Roxbury, Back Bay Fens, Muddy River, part of the Neponset River, Mother Brook; also land lying within thirty feet of any pond or stream, and all marshes and swamps as defined by the Wetlands Protection Act.

The amendment also would establish a new Section 3-1A of the Zoning Code entitled SPECIAL PURPOSE OVERLAY DISTRICTS. This section would authorize the new Flood Hazard Overlay District and would also authorize other special purpose overlay districts now covered in Section 3-1: planned development areas, urban renewal areas, restricted parking district and adult entertainment district.

Copies of the Text Amendment Application may be obtained, and the series of Flood Hazard Maps may be examined, at the office of the Zoning Commission, Room 907, Boston City Hall, or at any of the neighborhood Little City Halls, between the hours of 9:00 a.m. and 5:00 p.m. any day but Saturdays, Sundays and legal holidays.

TO THE ZONING COMMISSION  
OF THE CITY OF BOSTON:

The Advisor to the Zoning Commission hereby petitions to amend the text of the Boston Zoning Code, as established under Chapter 665 of the Acts of 1956 as amended, as follows:

1. By striking out the last four paragraphs of Section 3-1 and inserting in place thereof the following section:

SECTION 3-1A. Special Purpose Overlay Districts. A subdistrict or part thereof or a contiguous group of subdistricts or parts thereof may be designated as a special purpose overlay district as follows: (a) planned development area (distinguished by the addition of the letter "D" to the designation of the subdistrict or subdistricts); (b) urban renewal area (distinguished by the addition of the letter "U" to the designation of subdistrict or subdistricts); (c) adult entertainment district (distinguished by the addition of the letter "E" to the designation of the subdistrict or subdistricts); (d) restricted parking district; or (e) flood hazard district. In an overlay district the regulations specified for the base subdistrict or subdistricts shall apply, insofar as they are not in conflict with special regulations specified for a particular overlay district.

2. By inserting into said Section 3-1A, following the above paragraph, the paragraphs, now in Section 3-1, headed Planned Development Areas, Urban Renewal Areas, Restricted Parking District and Adult Entertainment District.

3. By inserting into said Section 3-1A, following the paragraphs inserted by item 2 above, the following paragraph:

Flood Hazard Districts. The location of and regulations for flood hazard districts are set forth in Article 25 of this code.

4. By inserting, following Article 24, the following article:



## ARTICLE 25

### FLOOD HAZARD DISTRICTS

SECTION 25-1. Statement of Purpose. The purpose of this article is to promote the health and safety of the occupants of land against the hazards of flooding, to preserve and protect the streams and other water courses in the city and their adjoining lands, to preserve and maintain the ground water table, to protect the community against detrimental use and development, and to minimize losses, by provisions designed to:

1. Restrict or prohibit uses and structures which are dangerous to health, safety or property because of water or erosion hazards or which cause damaging increases in erosion, flood heights or flood velocities.
2. Consider flood plain management programs in neighboring areas.

SECTION 25-2. Definition of District. The flood hazard district is described as follows:

1. All bodies of water within the corporate limits of the City of Boston and all land within said limits with elevations at or below the following elevations, based on Mean Sea Level (M.S.L.) or Boston City Base (B.C.B.):
  - a. Coastal Areas: All land along or sloping toward Boston Harbor, Dorchester Bay or Massachusetts Bay, including the tidal estuaries of the Charles, Mystic, Chelsea and Neponset Rivers: 11 feet M.S.L. or 16.65 feet B.C.B.
  - b. Charles River: All land in West Roxbury along or sloping towards the Charles River: 95 feet M.S.L. or 100.65 feet B.C.B.; all land in Boston Proper, Roxbury and Brighton along or sloping towards the Charles River: 6.9 feet M.S.L. or 11.55 B.C.B.
  - c. Neponset River: All land in Dorchester and Hyde Park along or sloping to the Neponset River (i) between Walter Baker Dam and the end of channel improvements made by the Metropolitan District Commission (approximately 2100 feet downstream from Truman Highway bridge as measured along the thread of the stream); all land within the improved channel of the river and all structures abutting said channel; (ii) between said end of channel improvements and Neponset Valley Parkway bridge: 41.35 feet M.S.L. or 47 feet B.C.B. plus 0.108 feet for each 100 feet upstream from said end of channel improvements, as measured along the thread of the stream; and (iii) between Neponset Valley Parkway bridge and the Dedham town line: 44.35 feet M.S.L. or 50 feet B.C.B.

- d. Mother Brook: All land in Hyde Park along or sloping to Mother Brook (i) between its confluence with the Neponset River and Hyde Park Avenue bridge: 41.35 feet M.S.L. or 47 feet B.C.B.; (ii) between the bridges at Hyde Park Avenue and the Penn Central Railroad: 43.35 feet M.S.L. or 49 feet B.C.B.; (iii) between the bridges at the Penn Central Railroad and Reservation Road: 45.35 feet M.S.L. or 51 feet B.C.B.; (iv) between the bridge at Reservation Road and the Knight Street dam: 47.35 feet M.S.L. or 53 feet B.C.B.; (v) between the Knight Street dam and the River Street bridge: 50.35 feet M.S.L. or 56 feet B.C.B.; and (vi) between the bridge at River Street and the Boston-Dedham Line: 52.35 feet M.S.L. or 58 feet B.C.B.
  - e. Muddy River: All land in Roxbury along or sloping to the Muddy River from Brookline Avenue to and including Leverett Pond: 12.35 M.S.L. or 18 feet B.C.B.
  - f. Back Bay Fens: All land in Roxbury along or sloping to the Back Bay Fens: 9.35 feet M.S.L. or 14.00 feet B.C.B.
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- 2. All lands lying within a distance of thirty feet from the normal bank of any pond, reservoir or open stream, unless a greater distance is required under Item 1 above.
  - 3. Marshes and swamps as defined by the Wetlands Protection Act, Mass. General Laws C. 131 s. 40.
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SECTION 25-3. Mapping. The flood hazard districts described above shall be indicated on the series of maps entitled "Flood Hazard Districts - City of Boston", on file in the Building Department. Said maps are incorporated herein by reference.

It shall be incumbent upon an owner proposing to use or build upon a lot, any part of which is shown by the maps to be in or to abut a designated flood hazard area, to provide topographic and/or vegetation surveys in sufficient detail to ascertain what portions of the lot, if any, lie within the areas described in Section 25-2.

SECTION 25-4. Use Regulations. The following uses are permitted as a matter of right:

- 1. Conservation of soil, water, plants and wildlife.
- 2. Outdoor recreation, including but not limited to play areas, parks and golf courses, also swimming, boating and fishing if not prohibited by other regulations.



3. Agriculture, horticulture, forestry and aquaculture.

A building or structure in a flood hazard district, if legally existing at the time of the adoption of this article and of the maps incorporated herein, or made nonconforming by subsequent amendment to this article and/or said maps, or authorized by the Board of Appeal under Section 25-5, may be used in conformance with the use regulations for the base district in which said structure is located, as set forth in Article 8.

SECTION 25-5. Exceptions

- A. Authorization for Exceptions in Flood Hazard Districts. As provided for in Section 10 of Chapter 665 of the Acts of 1956 as now in force or hereafter amended, the Board of Appeal may, in a specific case after public notice and hearing, allow an exception from the provisions of Section 25-4. Such exception shall lapse and become null and void unless used within two years after the record of said Board's proceedings pertaining thereto is filed with the Building Commissioner pursuant to Section 8 of said Chapter 665.
- B. Site Plan. A site plan at a scale no greater than 1" = 100', prepared by a registered land surveyor or registered professional civil engineer, shall be submitted in sextuplicate to the Building Commissioner by the applicant. Such plan shall show at least the following:
1. The location, boundaries and dimensions of the lot or lots.
  2. Contour lines described in Section 25-2, if any, and two foot contour lines of the existing and proposed configuration of land.
  3. Areas supporting vegetation commonly found in marshes and swamps.
  4. Location of existing and proposed structures, watercourses, utility easements, means of access, drainage and sewerage facilities.
  5. The area and location of existing or proposed leaching fields, if any.
- C. Review by city agencies. Each appeal for an exception shall be filed in sextuplicate with the Building Commissioner, who shall retain one copy for his files and transmit the other copies as follows: one to the Board of Appeal, one to the Boston Redevelopment Authority, one to the Boston Conservation Commission, one to the Public Works Department and one to the Health and Hospitals Department. Each of the four last named agencies shall, within thirty days after the date of such transmittal,

file with the Board of Appeals a report with recommendations to aid the Board of Appeal in judging the appeal and determining what conditions and safeguards may be necessary or appropriate. The Board of Appeal shall not hold a hearing nor render a decision until such report with recommendations has been received and considered, or until thirty days shall have elapsed following such referral without receipt of such reports.

D. Conditions Required for Exceptions. The Board of Appeal shall allow an exception only if it finds that all of the following conditions have been met:

1. that a proposed use or structure will not be detrimental to the public health, safety, or welfare and will not derogate from the purposes of this code or this article;
2. that the use or structure will comply with the provisions of the underlying district or districts;
3. that the use or structure will not overload any public water, drainage or sewer system or other municipal system to such an extent that the requested use, or any developed use in the immediate area or in any other area of the city, will be unduly subjected to hazard affecting health, safety; or the general welfare;
4. that public utilities and facilities, such as sewer, gas, electrical, and water systems are located, elevated, and constructed to minimize or eliminate flood damage;
5. that adequate drainage is provided so as to minimize exposure to flood hazards; and
6. that new or replacement water supply systems and/or sanitary sewerage systems are designed to minimize or eliminate infiltration of flood waters into the systems and discharges from the systems into flood waters, and that onsite waste disposal systems will be located so as to avoid impairment of them or contamination from them during flood.

E. Other Conditions Necessary as Protection. In allowing an exception, the Board of Appeal may attach such conditions and safeguards as it deems necessary to insure harmony with the general purposes and intent of this article and code.

SECTION 25.6. Application. The provisions of this article are not intended to repeal, amend, abrogate, annul, or interfere with any lawfully adopted statutes, ordinances, covenants, regulations, or rules. However, where this article imposes greater restrictions, the provisions of this article shall govern.

Petitioner: Advisor to the Zoning Commission Address: City Hall, Room 907

By: Mace Wenniger Boston, Mass. 02201

Date: \_\_\_\_\_ Tel.No.: 722-4300, ext. 245/246



## APPENDIX

### FLOOD HAZARD DISTRICTS SOURCES OF ELEVATION FIGURES

#### A. Coastal Areas

Letter from Joseph P. Ignazio, Chief, Planning Division, U.S. Corps of Engineers, Waltham, Massachusetts dated May 7, 1974:

1. 100 Year Flood = 10.8 feet M.S.L.
2. April 1851 storm would equal 11 feet M.S.L. if corrected by the 1929 general adjustment.
3. Mr. Ignazio recommended 11 feet M.S.L. (16.65 B.C.B.).

#### B. Charles River

1. West Roxbury: U.S. Geodetic Survey records: Flood of record in August 1955 reached elevation of 93.6 feet M.S.L. at Spring Street Bridge, 93.5 feet in area of the Gardner Street Dump. Mr. Ignazio, in letter cited above, recommends 95 feet M.S.L. (100.65 B.C.B.) in view of expected urbanization of watershed.
2. Basin: U.S. Army Corps of Engineers, Interim Report on Lower Charles River, May 1968, page 16: Flood of record in August 1955 reached an elevation of 6.9 feet M.S.L. (11.55 feet B.C.B.) (Note: after completion of Warren Street Dam, elevation should not exceed 10 feet B.C.B.).

#### C. Neponset River

1. No elevations given for the portion of the river where flood control measures have been completed by the Metropolitan District Commission. Flooding near the Walter Baker Dam which occurred in 1966 because of a malfunction of the dam was on the Milton side of the river; on the Boston side it was contained by mill structures.
2. Upstream of flood control measures: Anderson-Nichols and Co., Inc., for the Massachusetts Water Resources Commission: Plan entitled Neponset River, 100 Year Flood Water Surface Profiles, 1971.

#### D. Mother Brook

Anderson-Nichols and Co., Inc. for the Metropolitan District Commission: three plans showing proposed flood control measures, entitled Mother Brook, dated October 3, 1972: Elevations are those shown for water surface without improvement except in the reach between the Knight Street dam, which is to be restored, and the River Street Bridge. In this reach the design water surface is higher than the water surface without improvements; and the design water surface the elevation is given.

E. Muddy River

U.S. Army Corps of Engineers Interim Report on Lower Charles River,  
Plate No. D-6; Flood of record, August 1955 = 12.35 M.S.L. or 18  
feet B.C.B.

F. Back Bay Fens

U.S. Army Corps of Engineers Interim Report on Lower Charles River,  
page D-23: Flow of 2,000 c.f.s. would produce an elevation of 13.9  
feet B.C.B. or 9.35 feet M.S.L. in the Back Bay Fens upstream from  
Ipswich Street.